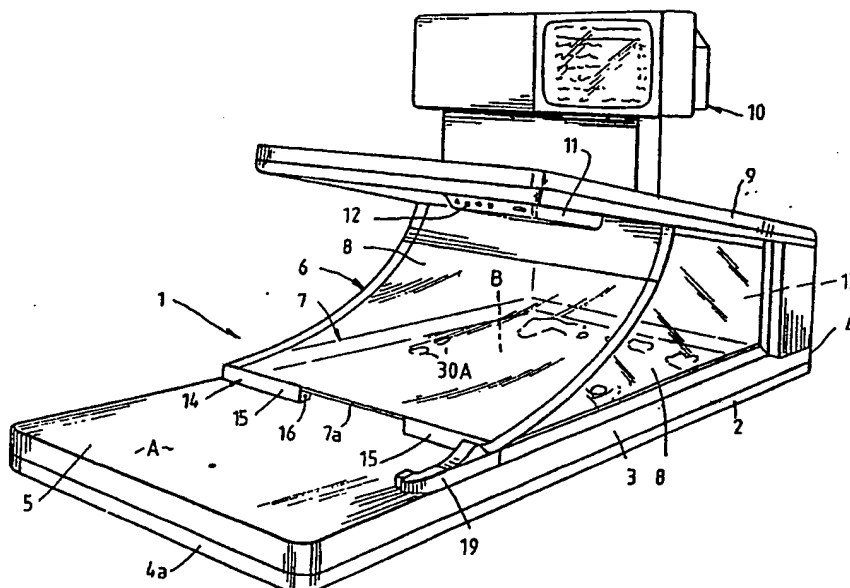




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(54) Title: GOLF PUTTING GREEN PRACTICE APPARATUS



## (57) Abstract

A golf putting green practice apparatus having an adjustable contouring platform (B) having a putting green like surface (5) thereon which is capable of being fashioned in a plurality of non-planar forms by adjustment means (60) under the surface (5) to simulate varied contoured green surfaces. Co-operating with contourable platform (B) is an approach area (A) of sufficient rigidity to support one or more players thereon and from which a ball can be putted onto and over the green like surface (5) in a direction of one of two ball receiving holes (31), each of which is located at a different position within the contourable platform (B). Control means are provided for controlling the adjustment means (60) so that the platform (B) can be selectively adjusted to a desired contour. The control means can also selectively open and close the ball receiving holes (31) so that a selected hole is able to receive a correctly struck ball.

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GOLF PUTTING GREEN PRACTICE APPARATUSFIELD OF THE INVENTION

5 This invention relates to a golf putting green practice apparatus and more specifically to an apparatus whose putting green can be selectively changed as desired.

BACKGROUND OF THE INVENTION

10 Conventional in-door putting practice devices comprises a golf ball receiving cup, which one would suitably position on a surface, such as a carpeted floor, and into which the golfer endeavoured to locate/sink the golf ball when struck by a putter. As is appreciated, the surface of a  
15 conventional putting green is not necessarily level, smooth or constant as is the surface of a carpet, and, the drag or friction upon the velocity of the struck ball on a putting green, is substantially different from that of a ball  
20 rolling upon the surface of a carpet. Thus, the worth of such a putting practice device is questionable in that it does not provide a realistic indication of the nature and surface of a true putting green surface, and therefore raises considerable doubt as to whether a similar putting stroke would be beneficial on a true putting green surface.

25 Another example of a common out-door putting practice device is that as provided by MINI GOLF, where a miniature 9 or 18 hole golf course normally formed from concrete and spread over a substantial area is used. The purpose of this device is to provide a different approach, normally in the

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form of different obstacles placed in the way of the hole of the putting green, such as bridges, dimple surfaces thereon, restricted openings, etc. This type of miniature course also does not adequately simulate the normal putting surface of a putting green, as the surface of the course is of concrete and again does not have a sufficient drag or friction upon the velocity of the struck ball to simulate the putting green surface, such that through the playing of this game or practice therewith does not give a realistic indication of ones putting ability. A most considerable disadvantage with this latter game is the substantial area that is occupied by it and as a result the need to locate it outdoors.

Accordingly, it has been found that in the interests of improving ones putting ability that it is necessary to avail oneself of the normal putting practice greens at golf courses.

The apparatus of the present invention therefore provides a more realistic putting practice device which will substantially simulate the playing of a putting stroke upon an undulating or contoured putting green surface. It is also found that through the present invention, not only does it provide an improved putting aid device, but it also lends itself to a golfing game.

#### SUMMARY OF THE INVENTION

The present invention provides a golf putting green practice apparatus comprising an adjustable contourable platform having a putting green-like surface thereon, said platform capable of being fashioned in a plurality of non-planar forms by an adjustment means to simulate varied

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contoured green surfaces; co-operating therewith a putting green approach area or an additional putting green-like area capable of supporting one or more players thereon and from which in an in-use situation, a ball is played by the player onto and over the green-like surface in a direction of one or two or more ball receiving means, each of which is located at a different position within the green-like surface; and a control means controlling the adjustment means whereby the adjustable contourable platform can be selectively adjusted to a desired contour and the control means can also selectively operate one of the ball receiving means to a playable condition, whereby it is capable of receiving a correctly struck ball therein.

Preferably, the adjustment means comprises drive means positioned at spaced locations under the contourable platform. Drive means being responsive to information provided thereto by the control means so as to raise and lower the contourable platform through a predetermined amount of movement (preferably substantially vertical movement), to impart a desired contour thereon.

#### BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 is a perspective view of one form of the apparatus according to the present invention;

Fig. 2 is a top plan view of the apparatus according to Fig. 1;

Fig. 3 is a cross sectional view of the apparatus according to Fig. 2;

Fig. 4 is an elevational view of the ball receiving means of the apparatus of the invention taken along line 4-4 of Fig. 2;

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Fig. 5 is an elevational view of an adjustment means of the apparatus of the invention taken along line 5-5 of Fig. 2;

5 Fig. 6 is an elevational view of a ball removing means of the apparatus of the invention taken along line 6-6 of Fig. 2;

Fig. 7 is an elevational view of the sweeper arm of the ball removing means of the apparatus of the invention taken along line 7-7 of Fig. 2;

10 Fig. 8 is a cross sectional view taken along line 8-8 of Fig. 7;

Fig. 9 is a top plan view taken along line 9-9 of Fig. 3; and

Fig. 10 is an elevational view of the ball delivery device of the apparatus of the invention taken along line 10-10 of Fig. 2.

15 DETAILED DESCRIPTION OF THE INVENTION

The apparatus of the invention lends itself to be used as a coin operated game. Thus, to protect the inner workings of the apparatus while at the same time ensuring that the game cannot be tampered with or played until the  
20 necessary token or correct amount of money has been paid, the apparatus in the embodiment shown is substantially encased in a housing.

25 The housing 1 as shown in Fig. 1 has a base 2, side walls 3 and 3a and end walls 4 and 4a. The platform 5 of the invention comprises two portions, Portion A, which is of or made sufficiently rigid to support one or more players

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thereon and to function as the approach area to the green putting surface of the apparatus or that part of the putting green which will permit a player to stand thereon. Portion A may also function as a cover to working mechanisms  
5 located thereunder and within the housing.

Portion B of the platform has sufficient adjustability or flexibility to be fashioned (i.e. resiliently distorted) to simulate the contour of different putting greens.

Thus, in the present embodiment, the platform has a  
10 fixed portion (Portion A), which is mountable to the housing on a support member 20 as described hereinafter, while the contourable or distortable Portion B is mounted (as hereinafter described) for generally free movement relative to the fixed end wall 4 of the housing.

15 Generally, the contourable portion, Portion B, is not adapted to support a player thereon, and as a result, a protective cover member 6 such as a screen is provided to cover the contourable Portion B.

20 The protective cover or screen 6, is preferably of a clear plastics material and has a front face 7 and side faces 8 and atop thereof, a roof section 9, to restrict unwanted access to the contourable Portion B of the apparatus.

25 In the illustrated embodiment, a display sign 10 is positioned on the roof of the protective cover 6 which may display advertising material, game information and instruction, a golf scene and/or act as a score board.

A coin/token receiving mechanism 11 as shown in Fig. 1 is affixed to the underside of the roof section 9 and may

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function as a game selection device. For example, the mechanism 11 may be provided with button selectors 12 where the player selects to play 9, 18, 36 etc. holes, and can select an appropriate golf course, for example Pebble Beach, St. Andrews that he wishes to play. The player can also select the degree of difficulty that he wishes to play whereby the usual contour for the designated green is maintained, or dampened for the beginner or enhanced for the expert.

As shown in Fig. 1, within the protective cover 6, the end wall 4 of the housing is provided with a screen 13, whereby a projection of a golf scene may be displayed whereon such that the player when standing on Portion A and putting towards Portion B, can view the screen, and the scene to the player has the appearance of one looking back along the fairway towards the tee of the hole to which he is putting.

A front edge face 7a of the protective cover 6 as shown in Fig. 1 is slightly raised above Portion A, to permit a ball played from Portion A to roll into the covered area of the apparatus, wherein Portion B is located. Sensor means 14 in the form of housings 15 having photoelectric eyes 16 therein, are provided on either side of the apparatus, to sense when a ball enters Portion B. These sensor means can therefore be used to tabulate the number of balls played on the apparatus. Further, as a safety factor, the sensor means 14 are also adapted to sense when a foreign object, for example a player's foot, or the putter itself enters the prohibited covered area of Portion B, such that the apparatus can be shut down and rendered inoperative to ensure that the foreign object does not damage the working mechanisms of Portion B when in operation.



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As shown in Figs. 2 and 3, the platform has Portions A and B integral therewith. In these Figs the platform is of a substantially cantilever type where Portion A (the fixed portion) is mountable via screw fasteners 17 to the support member 20, which itself is fixed to a support frame 21 of the housing.

The platform is of a suitable material, i.e. a suitable flexible board that can be distorted to achieve the desired contoured configuration. The platform can therefore be manufactured from any conventional material, such as plastics or wood, by any conventional means, provided it has sufficient distortibility to provide the desired putting green contoured configurations.

To the upper surface 5a of the platform, is provided a putting green-like surface 18 made preferably from a plastics material to simulate the surface of a putting green. This green like surface 18 preferably causes friction against a ball moving on it, to retard the ball's travel as is observed when putting on conventional putting greens.

To the support member 20 which as in Fig. 2 partially surrounds the fixed Portion A of the platform, it may or may not (as is depicted in Fig. 2) have the same green-like surface 18 applied thereto to its upper exposed surface, or it may have a second surface, again of a suitable material, to give the appearance of or serve as a fringe area i.e. approach area that surrounds putting greens.

The platform as illustrated in Fig. 2 is of a substantially rectangular configuration, however in another embodiment, the platform can be of a substantially T-shape configuration, wherein the cross-piece of the T forms

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Portion A, which is adapted to be mountable directly upon the support frame 21 of the housing or covers entirely over the support member 20. The long piece of the T being the Portion B.

5           In Fig. 2, there is shown a ball receiving means 30, which can take the form of putting green cups or holes 31 and/or bunkers or traps 32 of the type that fringe putting greens. In the example shown, the bunkers 32 are exposed to act as hazards to receive a ball that has not been  
10           correctly played into the desired putting cup or hole 31. The bunkers 32 are provided with openings 32a in their bases, such that a ball that is played into or falls into a bunker is permitted to pass out of the bunker through  
15           opening 32a and drop into a ball collecting means 40 located thereunder. The bunkers 32 may also be provided with sensing devices (not shown) which are adapted to record that an unsuccessful ball has been played thereinto, thereby triggering the control means of the apparatus to  
20           fashion a new contoured surface upon which the next ball will be played.

          The ball collecting means 40 is positioned substantially under Portion B and is fixed to and extends between the side walls 3 and 3a and end wall 4 of the housing. As shown in Fig. 2, Portion B is spaced from the side (3, 3a)  
25           and end wall (4) of the housing, such that a ball which is incorrectly played and rolls off or is swept off over the edges of Portion B, is permitted to fall therefrom and be caught on the ball collecting means 40 positioned  
30           thereunder. The ball collecting means 40 is positioned at an angle with respect to the base 2 and side (3, 3a) and end walls (4 and 4a) of the housing, so that balls caught thereby are each able to roll from any place on the collecting means 40 to a ball assembly region 41 positioned

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within the housing and preferably substantially below the ball delivery chute 19 located upon Portion A.

5 The ball receiving means 30 is a placed hole 31 in Portion B and Portion B has at least two holes, (but in the illustrating embodiment, three are shown) therein. Since Portion B of the platform has a number of holes 31 therein, and it is desired that each hole does not hinder a player's shot, when aimed at another hole, each hole is operable in a closed or open i.e. playable condition. Thus, it is possible with the invention, to have a number of holes 31 in line or randomly placed in Portion B, such that when the hole to be played is in the open condition, the remaining holes remain closed and the moving ball is able to roll over the closed holes without substantially affecting the motion of the ball as if Portion B did not have these closed holes therein. Accordingly, when the desired hole to be played has other holes (but in the closed position) in front of it, the player is able to still play that hole without concern that the surrounding other but closed holes, will interfere with his shot. The means by which each hole 31 is opened and closed is now described with respect to Fig. 4.

25 To implement the opening or closure of the hole 31, there is provided a movable plug member 32, which is adapted to move into and out of the hole by means of a drive motor 33 co-acting with the plug member 32. In the embodiment shown, the plug member is mounted to the underside of the controllable Portion B by a mounting bracket 34. The plug member comprises a substantially cantilever support plate member 35 having thereon a plug means 36 of a complimentary configuration to its hole 31. To form the edge of the hole, a ring member 37 is located and secured with screws 38 to the platform 5. The ring member 37 prevents the green-like

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putting surface from lifting from the upper platform surface 5a in the region immediate the hole edge. The ring member 37 holds a turned down and tucked portion 5b of the putting green surface 5a. So that the upper surface of the plug means 36 does not interfere with a ball as it rolls thereover, putting green surface 5a can be applied thereto. This can be achieved by affixing the surface 5a to the upper exposed surface 36a of the plug means 36 with a plug cover member 39. As is seen in Fig. 4, there is an area surrounding the circumference of the plug cover member 39 and ring member 37 where there is no putting green surface 5a. Accordingly, as would be appreciated, these exposed areas should be of a minimum width or area so that they will not interfere with a ball when it is moving, when it rolls over the exposed area. The ring member 37 can also act as a stop means to prevent the plug means 36 from protruding out of the hole into the exposed surface region of the platform by operating with the plug cover mean.

That end of the plate member 32 not carrying the plug means 36, is pivotably connected to a mounting bracket 50. The leg of the plate member 35a being likewise pivotably connected to a retractable arm 33a of the drive motor 33, whereby through activation of the motor in one direction, the arm is caused to move in (retract), thereby causing the plate member 32 and plug means 36 to move downward as is shown by arrow labelled C of Fig. 4, as a result, the hole 31 when opened is able to receive a ball played thereinto. Activating the motor in the opposite direction, the tractable arm 33a moves out and the plug member also moves to close the hole.

The ball receiving means 30 may contain a sensor member not shown, whereby if a ball is correctly played

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and drops into the hole 31, the sensor is tripped and there in turn the control means activates the drive motor 33 to close the hole and activate a scoring mechanism (not shown) to count a correctly played putt. As the ball  
5 receiving means 30 i.e. hole 31 and plug member 32 are mounted to the contourable Portion B of the platform, they are able to ride with the Portion B as its contour is modified.

10 An example of the adjustment means 60 by which the contour of the contourable Portion B is changed, modified or fashioned is shown in Fig. 5.

The adjustment means 60 of the invention causes the adjustable contourable Portion B to be raised and lowered to take on non-planar forms. In the embodiment illustrated,  
15 there are three adjustment means 60 provided where one means 61 is responsible for raising and lowering the mid region of Portion B while the other two adjustment means 62 and 62a, located on either side of the apparatus of the invention, are capable of causing upward and downward motion  
20 on the sides of the contourable Portion B. Thus, by raising and lowering Portion B, an undulating surface therefore and/or "breaks" to one side or the other of the apparatus may be provided.

Each adjustment means generally comprises a drive means  
25 63 having a drive motor 64 and drive gear 65. The drive gear co-acts with the drive wheel 66 and a drive arm 67 thereon. The drive arm 67 being located off center of the drive wheel 66 and being pivotively connected thereto. The drive wheel 66 has an axially extending pin 66a having  
30 a rounded end thereon, which rounded end may act as a ball joint means, to engage with a complimentary co-acting open boss end (not shown) of the drive arm, while the other end

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67a of the drive arm 67 is similarly configured to co-operate with an analogous mounting means 70 positioned on the underside of the contourable Portion B. This mounting means 70 comprising a mounting bracket 71 screw fixed to the underside of the platform, and fixed and extending substantially parallel therefrom, a spindle member 72 having a substantially rounded free end 72a, which is adapted to co-operate with the other opened boss end 67a of the drive arm 67.

Accordingly, there is a degree of flexibility between the drive arm 67 and the platform, and the drive arm 67 and the drive wheel 66, to permit a degree of longitudinal and lateral movement of the platform relative to the housing. The drive motor 64, its drive gear 65 and the drive wheel 66 are mounted on support frames 73 and 74 of the housing. As will be appreciated, through rotation of the drive wheel as indicated by the arrow labelled D, the drive arm 67 is caused to move downward thereby pulling downwardly on that part of the contourable Portion B, to which it is attached. Through rotation of the drive wheel 66, the contourable Portion B can be moved upwardly and downwardly.

Through the use of a control means, which is preferably located under Portion A (but not shown) of the apparatus, the drive means 63 of the adjustment means 60 can be programmed to set the drive wheel 66 at a designated number of positions, which in turn will cause that part of the platform which is attached to the wheel 66 via arm 67, to rise and fall through predetermined heights. Likewise, the drive motor 33 of the ball receiving means 30 can be controlled by the control means so that the ball receiving means 30 is either placed in an open or closed position. The control means may comprise a programming means for providing information

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relative to a predetermined operation to the drive motors of the adjustment means 60 and the ball receiving means 30.

5 In the event that a ball or a number of balls have been played but not putted or they have not fallen into the bunker or traps 32, such that they remain upon the putting surface, there may be required a ball removing means 80 to remove those balls from the surface to permit the next player to have a clear shot at the hole or to ensure that the balls are removed before the surface takes on the next  
10 desired contour. In the embodiment shown there is provided a ball removing means 80 in the form of a sweeper means. The sweeper means is preferably a sweeper arm 81 being pivotted at one end 82 and having a break joint 83 positioned along its length.

15 To enable the sweeper arm 81 to sweep across the contourable Portion B, it is provided with a drive means 84, which drive means 84 like that of the ball receiving means 30 is mountable to the contourable surface. The drive means 84 of the sweeper arm being mounted on a mounting  
20 bracket 75, which is fixed to the underside of the Portion B. The drive means 84 has a drive motor 85 and a drive gear 86 which gear co-acts with a drive wheel 87. To the center and passing through the drive wheel 87 is located a drive shaft 88, which is adapted to protrude above and through a support tube 89. The sweeper arm 81 is secured at one end  
25 of the drive shaft while the other end of the shaft is bolted to the drive wheel to ensure a good contact therewith. Through rotation of the drive wheel 87, the sweeper arm 81 in turn is caused to move. As shown in Fig. 9 the sweeper  
30 arm 81 is in a rest or folding position as labelled A, where the arm is in a bent configuration i.e. the arm is in two pieces about the break joint 83 where one piece is at

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substantially 90° with respect to the other piece, to permit the folded arm to be tucked away on the outer edge regions of Portion B. The sweeper arm 81 when activated causes the arm to gradually move to position B of Fig. 9, where the break or bend in the arm is beginning to give way to a fully extended and unbroken arm as is indicated at position C. As the arm continues to sweep across the contourable surface, its free end 90 will strike as is shown by position D, a sweeper arm guide 100, whereafter through the continued movement of the sweeper arm, the break will reappear to enable the arm to again take up its rest or folded position, but on the other side of the contourable surface as is shown by the position labelled E. Reactivation of the drive motor 85 will cause the folded extended arm to reform but from the opposite direction to that not shown. Thus the sweeper arms sweeps from one side to the other side of the housing.

The sweeper arm guide means 100 as shown in Figs. 3 and 6, can be formed from an upwardly extending flange or flange members 101, which may extend around the perimeter of the contourable Portion B. The flange member 101 then may move with the contourable Portion B, and since the surface is contourable, the flange member 101 is also capable of extension along its length by the provision of an overlapping tongue member 102 in one section of the flange member 101a being adapted to slide under the other section of the cooperating flange member 101b. To the top of the flange member 101, may be provided with a section of the platform material with the putting green-like surface fixed thereto, by rendering the sweeper arm guide means 100 less conspicuous. When the sweeper arm 81 is in the rest or folded position, it is adapted to lie under the flange 101 member as is illustrated in Fig. 2 where the sweeper arm as shown in dotted outline under the



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flange member 101.

The sweeper arm 81 of the invention as illustrated comprises a two part member, joined at the break joint 83, best shown in Fig. 8. The arm is made of a substantially tubular steel construction and depending therefrom and spaced therealong are located guide buttons 103 which are adapted to ride over and not affect the contour of the contourable surface. The guide buttons can be affixed to the tube by any conventional means, but as illustrated, each guide button 103 is provided with an upwardly extending fixing member 104, which is adapted to be received within the tubular steel and by which it can be fastened thereto. To the guide button at the free end 90 of the sweeper arm 81 there is provided an upwardly extending stop means 105 which is adapted to co-act with the sweeper arm guide means 100 when it contacts therewith to prevent the sweeper arm 81 from sweeping beyond the outer perimeter of the contourable Portion B. The break joint 83 in the arm 81 is formed at the end remote from the drive shaft connection 82 of first arm member 106 and which has a cam surface 107 thereat. The first arm member 106 being pivotally connected to the second arm member 108 via a guide button fixing member 104. Located on the second arm member 108 is a cam follower 109, which is spring loaded to assist as the sweeper arm swings from positions A to B to C as illustrated in Fig. 9. The cam follower 109 rises over the cam 107 until it nestles in the bottom of the cam 107a and at which point, the sweeper arm is then in its extended condition as shown by position C of Fig. 9. When the stop means 105 at end 90 strikes the sweeper arm guide means 100, the first arm member 106 continues to move along its semicircular path. However, the sweeper arm end 90 is now prevented from moving in its semicircular path. This causes the cam follower to disengage out of the bottom 107a of the cam 107,

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and allows the reformation of the break joint to enable the  
sweeper arm 81 to move to its folded rest position. The  
purpose of the spring loading of the cam follower 109 is  
to ensure that the sweeper arm 81 will be in its fully  
5 extended form until the cam follower 109 is forced to  
disengage from its desired position in 107a of the cam 107.

With the apparatus of the invention, there is provided  
a ball delivery device 110, which is adapted to supply the  
appropriate ball or number of balls to the player. The  
10 balls are delivered to the player through the ball delivery  
chute 19 as located upon Portion A of the apparatus.  
Through the use of the control means of the apparatus, it  
is possible to render the apparatus inoperative i.e.  
unplayable, by inactivating the ball delivery device 110.

15 The ball delivery device 110 is mountable to a support  
frame 77, 78, 79 of the housing. The device 110 provides  
for a drive means which comprises a drive motor 111 and  
drive gear 112, which co-operate with a drive wheel 113.  
To the drive wheel 113 there is fixed a delivery arm member  
20 114 and at its free end, there is provided a ball delivery  
cup 115, which is adapted to carry the ball from the  
interior of the apparatus housing to the ball delivery  
chute 19.

To further facilitate in retaining a ball within the  
25 ball delivery cup 115, there is provided a ball retaining  
means, which in the embodiment illustrated in Fig. 10  
comprises a pivotal spring loaded lever 116 which when the  
arm is in the raised position, one end of the lever aids in  
holding the ball within the ball delivery cup 115. When the  
30 lever 116 strikes the underside ball delivery chute 19 as  
shown by position F of Fig. 10, the lever 116 is pushed

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downward with respect to the movement of the delivery arm member 114 due to contacting the underside of the chute 19 ball race 19a, thereby disengaging the lever 116 in retaining the ball, to permit the ball to then leave the cup 115 and roll down the ball delivery chute 19. When the delivery arm member 114 disengages from the ball delivery chute, the lever 116 will spring back into its retaining position. As the delivery arm member 114 descends, an arm 117 on the cup 115 is adapted to engage another ball retaining means again a spring load lever 118 positioned on a chute 119 which received the previously played balls from the ball-assembly region 41. The chute 119 acts as a ball race. As is shown in Fig. 10, the arm 117 of the cup 115 causes the lever 118 to disengage with the ball lying immediately thereagainst it, whereby that ball is able to roll out of the chute 119 and drop into the ball delivery cup 115. When the drive motor 111 is again activated to raise the ball cup 115 toward the ball delivery chute 19, the retaining lever 118 on the chute 119 is released and being spring loaded is caused to resume its relaxed position, thereby acting as a stop preventing the next ball in the chute 119 from inadvertently rolling thereout of.

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We Claim:

1. A golf putting green practice apparatus comprising an adjustable contourable platform having a putting green-like surface thereon, said platform capable of being  
5 fashioned in a plurality of non-planar forms by an adjustment means to simulate varied contoured green surfaces; co-operating therewith a putting green approach area or an additional putting green-like area capable of supporting one or more players thereon and from which is an in-use situation,  
10 a ball is played by the player onto and over the green-like surface in a direction of one or two or more ball receiving means, each of which is located at a different position within the green-like surface; and a control means controlling the adjustment means whereby the adjustable contourable platform  
15 can be selectively adjusted to a desired contour and the control means can also selectively operate one of the ball receiving means to a playable condition, whereby it is capable of receiving a correctly struck ball therein.

2. The apparatus to claim 1, wherein the adjustment means comprises drive means positioned at spaced locations  
20 under the contourable platform, and being responsive to information provided thereto by the control means to raise and lower the contourable platform through a predetermined amount of movement to impart a desired contour thereon.

25 3. The apparatus of claim 2, wherein the drive means comprises a drive motor cooperating with a drive wheel to which the contourable platform capable of being coupled thereto, whereupon rotation of the drive wheel, the contourable platform is selectively distorted by the raising and lower  
30 thereof.

4. The apparatus of claim 1, wherein the control means comprises a programming means which controls the drive wheel's rotation, and degree of rotation thereby the amount of contour  
change to the contourable platform.

35 5. The apparatus of claim 1, wherein there are at least two ball receiving means, each of which is secured to the

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underside of the contourable platform and moves therewith, and wherein one of the ball receiving means in response to the control means is rendered in an open playable condition to receive a ball therein, while the other ball receiving means also response to the control means is maintained in a closed non-playable condition.

6. The apparatus of claim 1 which further includes a ball removing means adapted to sweep over the contourable platform to remove a ball or balls that remain thereon after the ball or balls have been played.

7. The apparatus of claim 1 which further comprises a ball delivery device whereupon operation of the apparatus, a ball from within the apparatus is delivered to that area capable of supporting the player to permit the player to strike the delivered ball in the direction of one of the ball receiving means.

8. The apparatus of claim 1, which further comprises a ball collecting means below the contourable platform whereby a ball that has been played onto the platform is subsequently collected and moves to the ball delivering device from which the ball is returned to the player.

9. The apparatus of claim 1 which further includes sensor means to sense a ball has been played and putted or not putted and in turn advise the control means that a hole has been completed, whereby the control means activates the adjustment means to provide the next desired contour to the contourable platform.

10. The apparatus of claim 1, wherein the apparatus is coin/token operated which upon operation dispenses a ball or a number of balls to the player via the ball delivery device to permit the player to practice putting.

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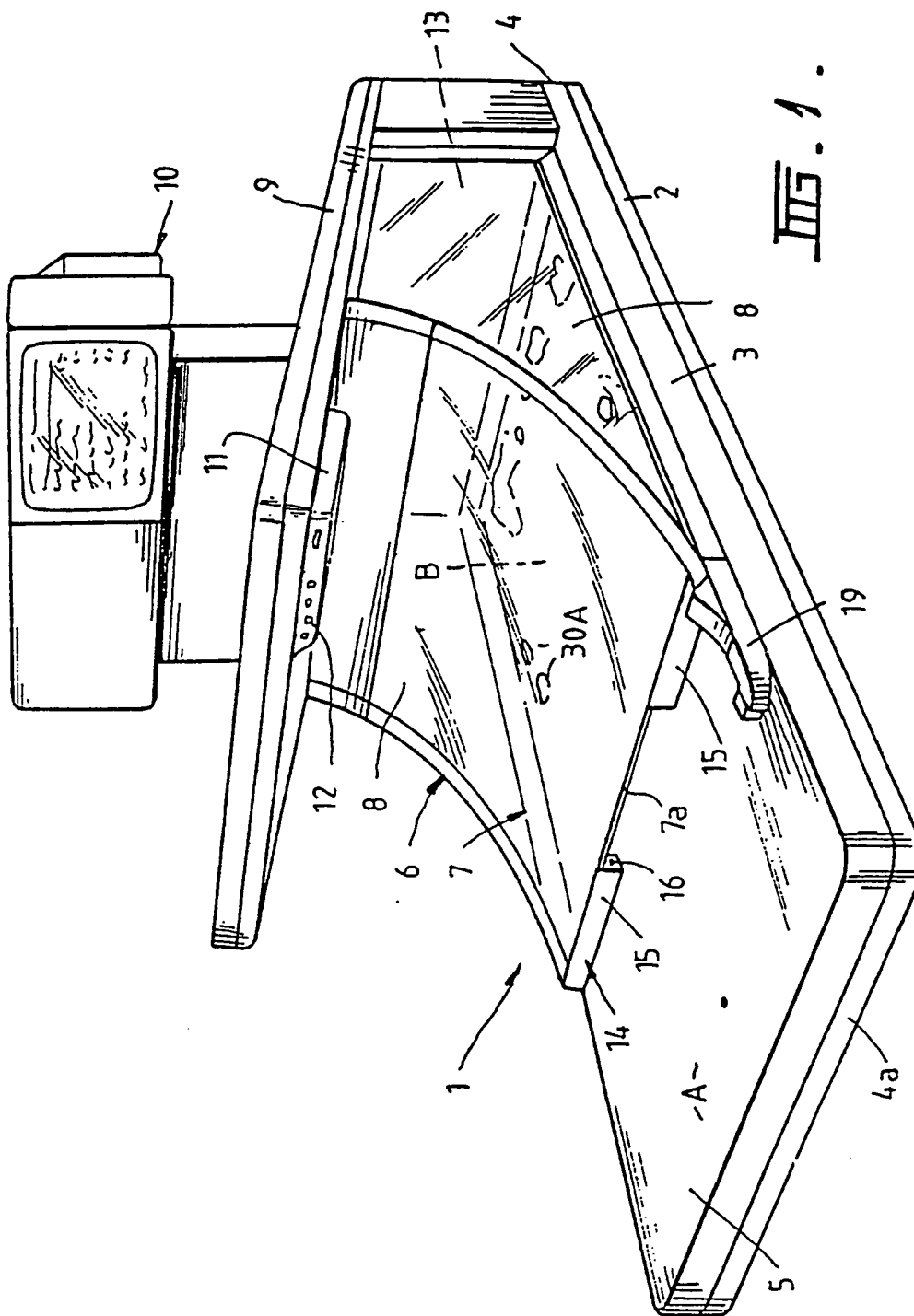
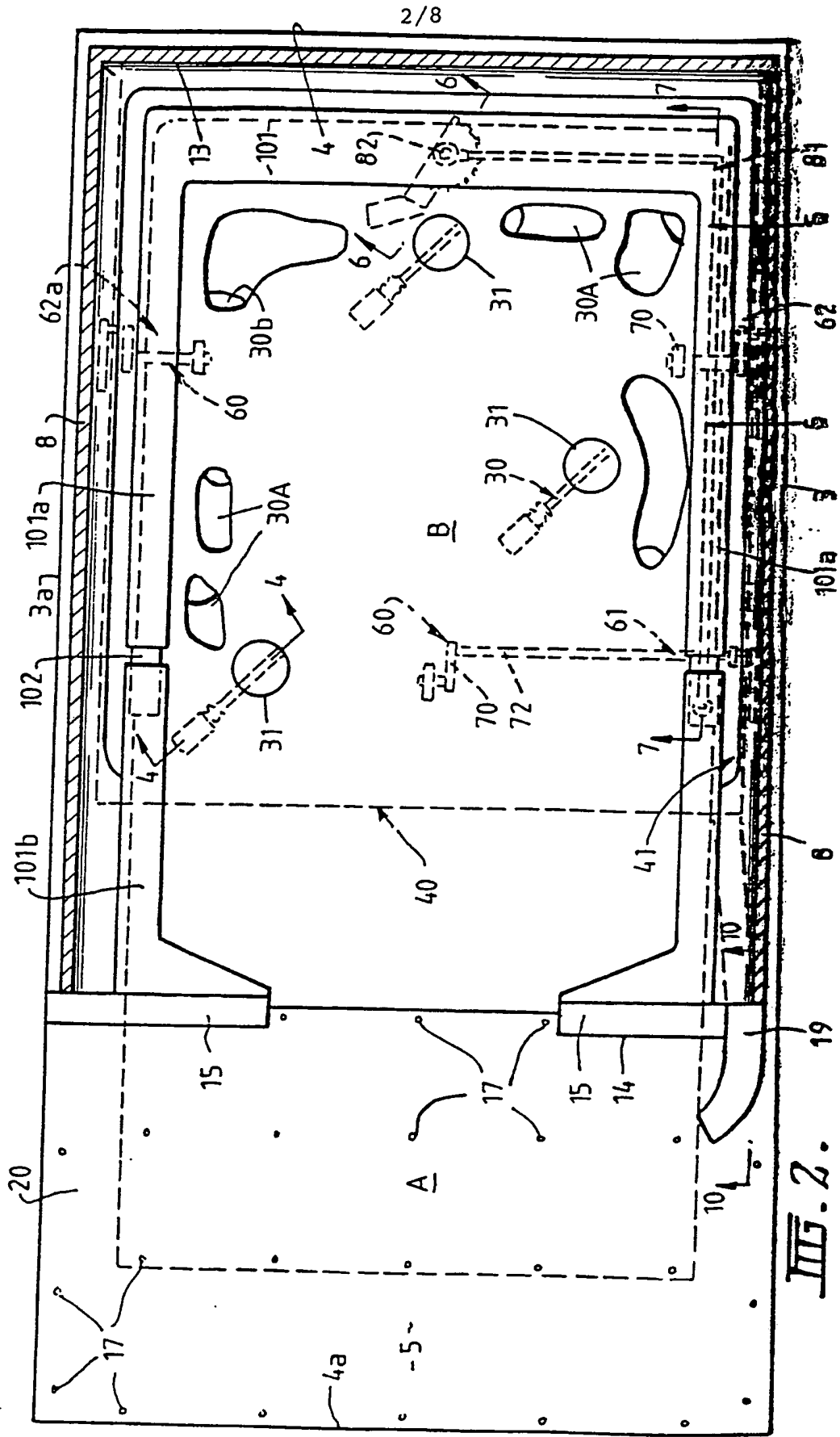


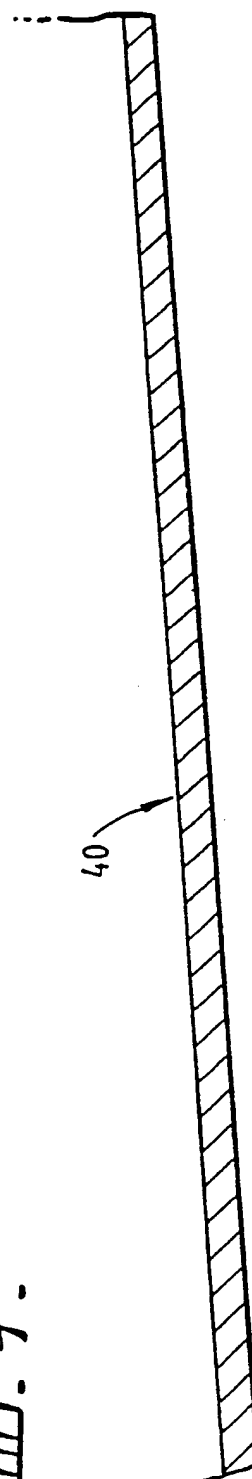
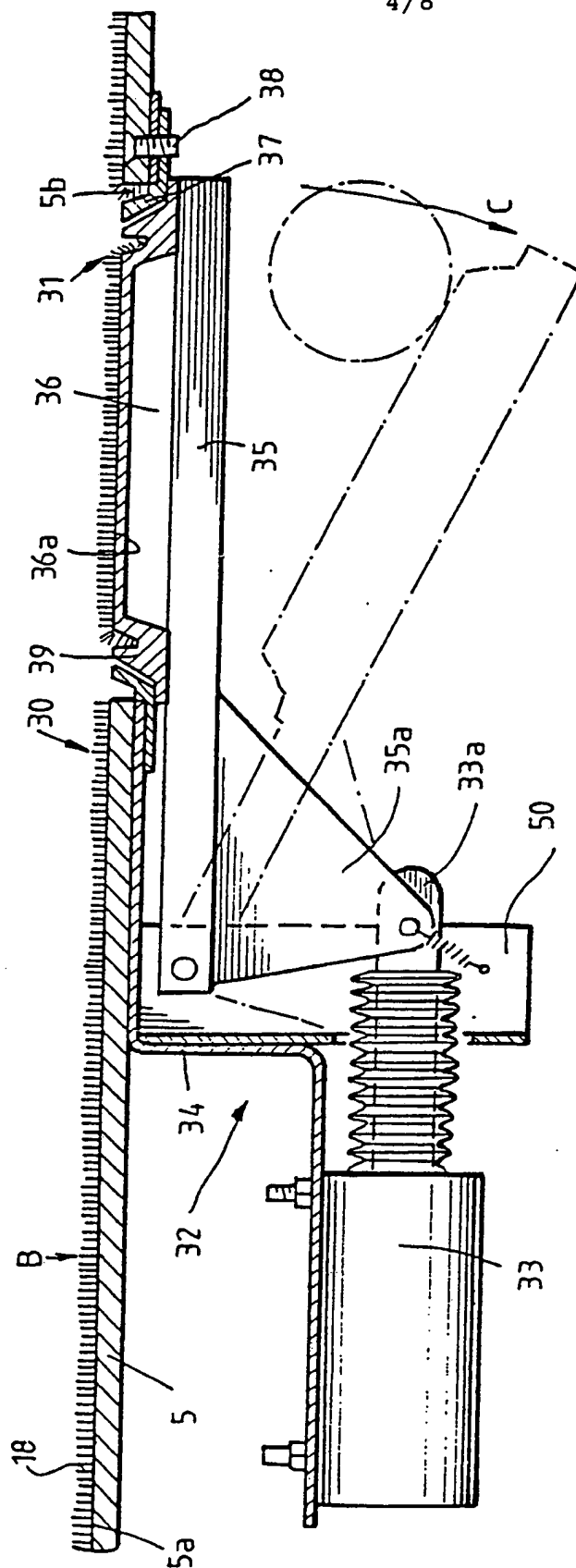
Fig. 1.



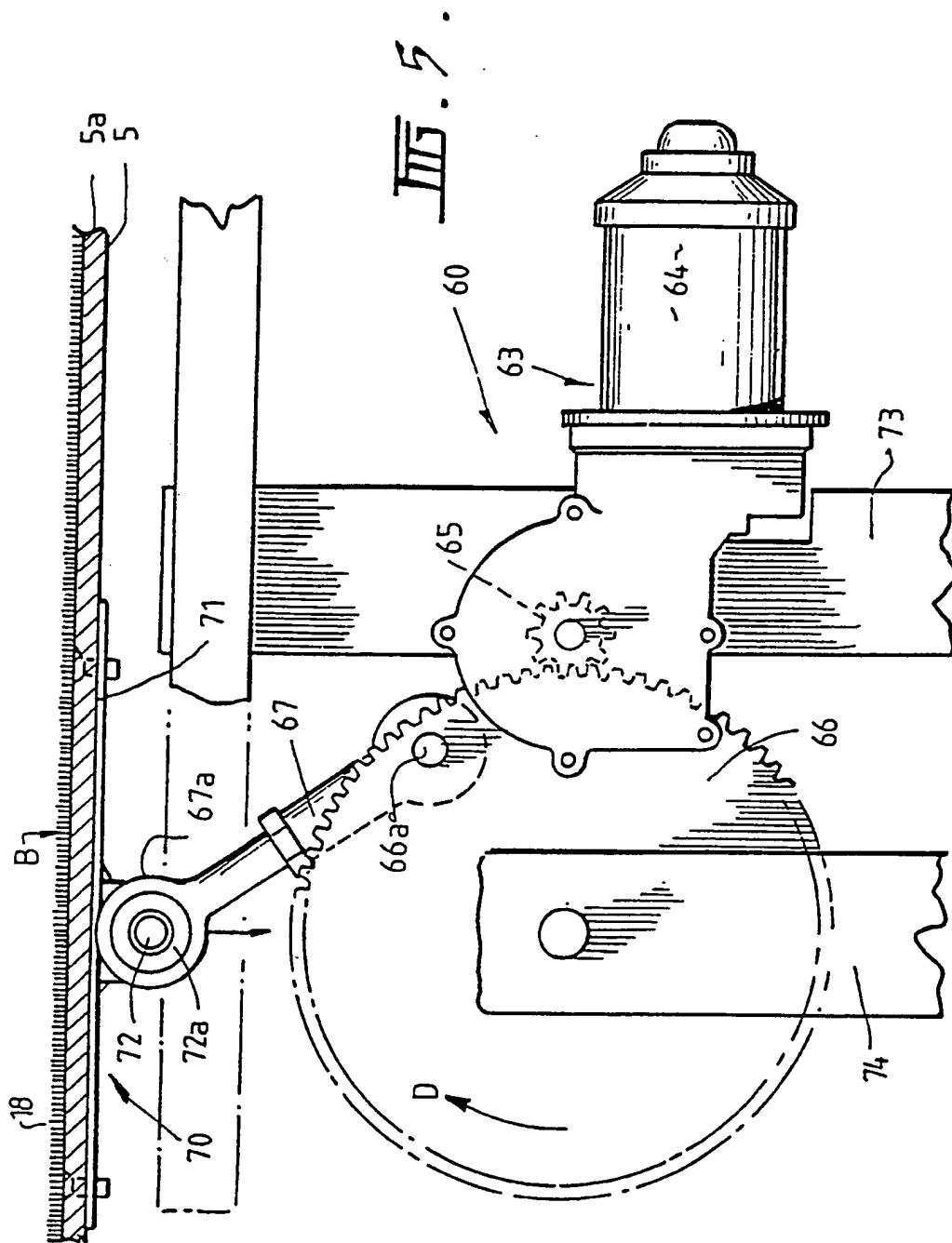
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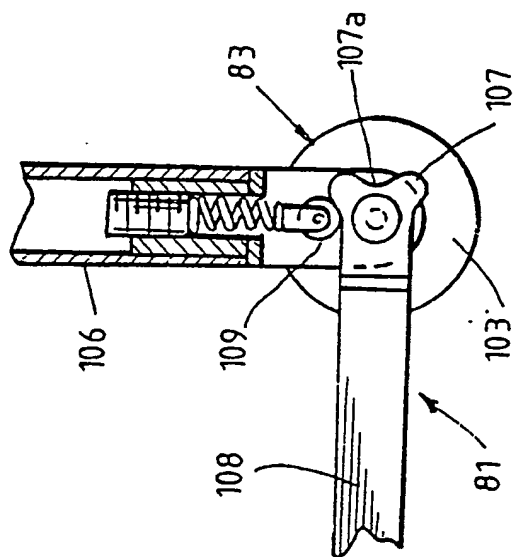
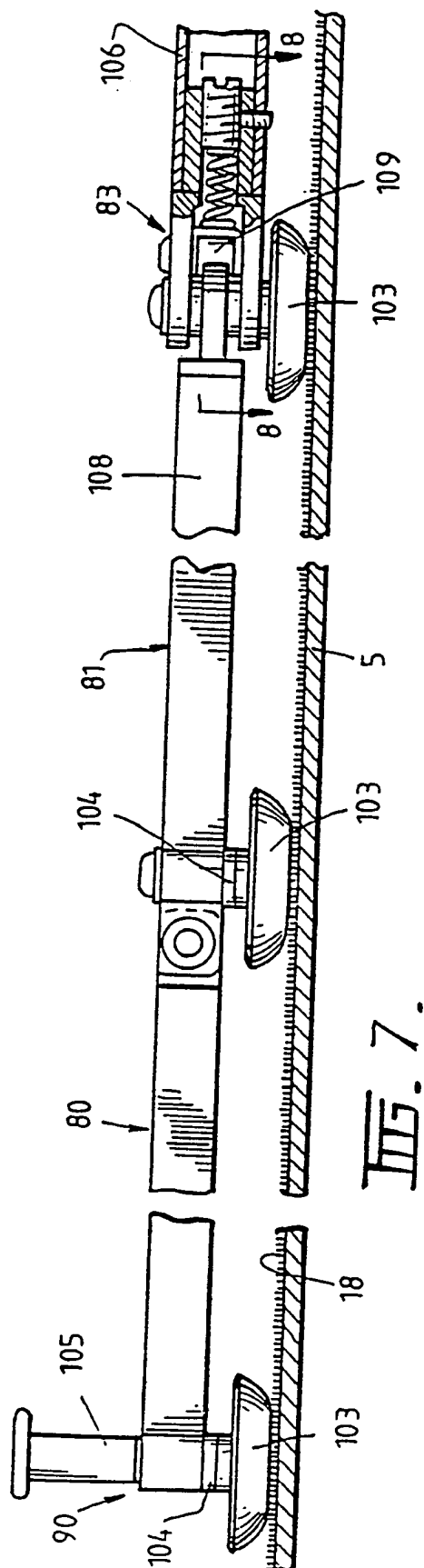






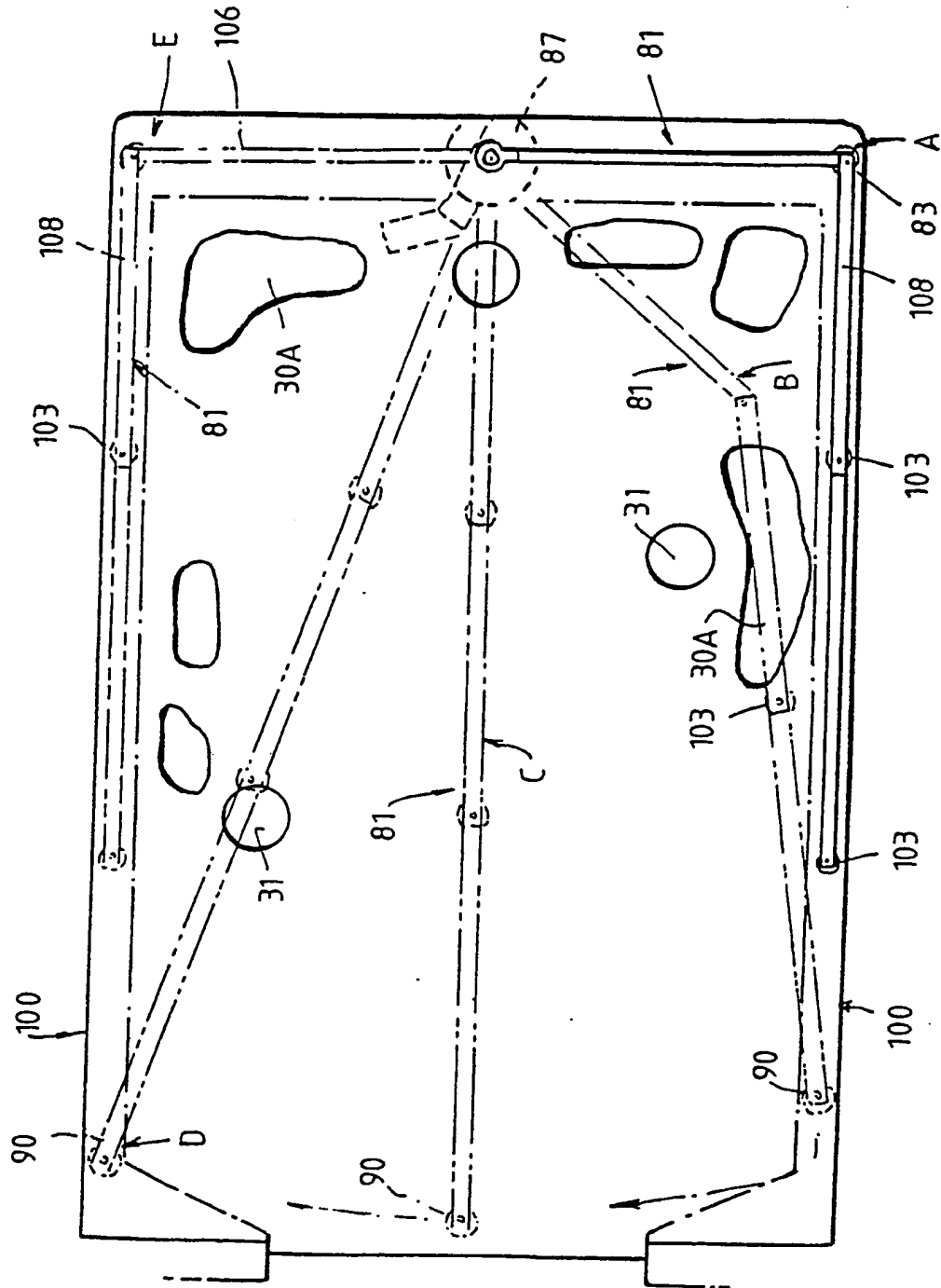
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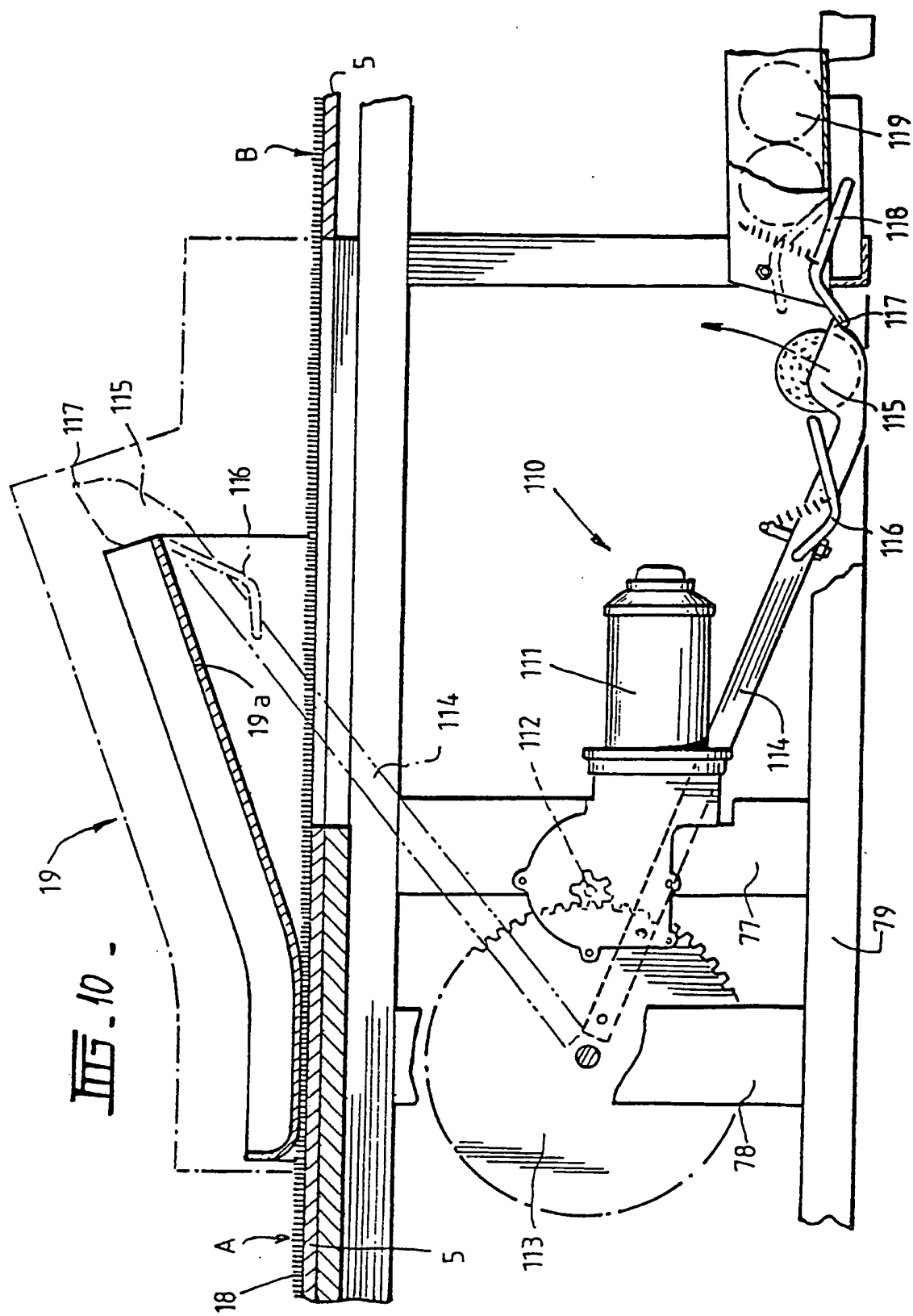


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7/8



五. 6.



# INTERNATIONAL SEARCH REPORT

International Application No **PCT/AU 89/00046**

<b>I. CLASSIFICATION OF SUBJECT MATTER</b> (if several classification symbols apply, indicate all) * According to International Patent Classification (IPC) or to both National Classification and IPC <div style="text-align: center; font-size: 1.2em;">Int. Cl.<sup>4</sup>    <b>A63B 69/36, 67/02</b></div>																							
<b>II. FIELDS SEARCHED</b> <div style="text-align: right; font-size: 0.8em;">Minimum Documentation Searched *</div> <table style="width: 100%; border: none;"> <tr> <td style="width: 25%; border: none; vertical-align: top;"> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="text-align: left; padding: 2px;">Classification System</th> <th style="text-align: left; padding: 2px;">Classification Symbols</th> </tr> <tr> <td style="padding: 5px;">IPC</td> <td style="padding: 5px;">A63B 67/02</td> </tr> </table> </td> <td style="border: none;"></td> </tr> </table> <div style="text-align: center; font-size: 0.8em; margin-top: 5px;">Documentation Searched other than Minimum Documentation to the Extent that such Documents are Included in the Fields Searched *</div> <div style="padding: 10px 0;">AU : IPC as above</div>			<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="text-align: left; padding: 2px;">Classification System</th> <th style="text-align: left; padding: 2px;">Classification Symbols</th> </tr> <tr> <td style="padding: 5px;">IPC</td> <td style="padding: 5px;">A63B 67/02</td> </tr> </table>	Classification System	Classification Symbols	IPC	A63B 67/02																
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<b>III. DOCUMENTS CONSIDERED TO BE RELEVANT</b> * <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 5px;"> <tr> <th style="width: 10%; font-size: 0.8em;">Category *</th> <th style="width: 60%; font-size: 0.8em;">Citation of Document, ** with indication, where appropriate, of the relevant passages **</th> <th style="width: 30%; font-size: 0.8em;">Relevant to Claim No. **</th> </tr> <tr> <td style="text-align: center; vertical-align: top;">Y</td> <td>US,A, 3114554 (HURLEY) 17 December 1963 (17.12.63)</td> <td style="text-align: center; vertical-align: top;">(1-10)</td> </tr> <tr> <td style="text-align: center; vertical-align: top;">Y</td> <td>US,A, 4611809 (GETTELFINGER) 16 September 1986 (16.09.86)</td> <td style="text-align: center; vertical-align: top;">(1-10)</td> </tr> <tr> <td style="text-align: center; vertical-align: top;">Y</td> <td>US,A, 3011791 (PAGE) 5 December 1961 (05.12.61)</td> <td style="text-align: center; vertical-align: top;">(6,7,8,10)</td> </tr> <tr> <td style="text-align: center; vertical-align: top;">Y</td> <td>US,A, 3658343 (ROGERS et al) 25 April 1972 (25.04.72)</td> <td style="text-align: center; vertical-align: top;">(1,2)</td> </tr> <tr> <td style="text-align: center; vertical-align: top;">A</td> <td>AU,A, 40917/78 (CROSS et al) 24 April 1980 (24.04.80)</td> <td></td> </tr> <tr> <td style="text-align: center; vertical-align: top;">A</td> <td>US,A, 4017085 (MAXWELL) 12 April 1977 (12.04.77)</td> <td></td> </tr> </table>			Category *	Citation of Document, ** with indication, where appropriate, of the relevant passages **	Relevant to Claim No. **	Y	US,A, 3114554 (HURLEY) 17 December 1963 (17.12.63)	(1-10)	Y	US,A, 4611809 (GETTELFINGER) 16 September 1986 (16.09.86)	(1-10)	Y	US,A, 3011791 (PAGE) 5 December 1961 (05.12.61)	(6,7,8,10)	Y	US,A, 3658343 (ROGERS et al) 25 April 1972 (25.04.72)	(1,2)	A	AU,A, 40917/78 (CROSS et al) 24 April 1980 (24.04.80)		A	US,A, 4017085 (MAXWELL) 12 April 1977 (12.04.77)	
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<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>* Special categories of cited documents: **</p> <p>"A" document defining the general state of the art which is not considered to be of particular relevance</p> <p>"E" earlier document but published on or after the international filing date</p> <p>"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</p> <p>"O" document referring to an oral disclosure, use, exhibition or other means</p> <p>"P" document published prior to the international filing date but later than the priority date claimed</p> </div> <div style="width: 45%;"> <p>"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</p> <p>"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step</p> <p>"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.</p> <p>"A" document member of the same patent family</p> </div> </div>																							
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ANNEX TO THE INTERNATIONAL SEARCH REPORT ON  
INTERNATIONAL APPLICATION NO. PCT/AU97/00046

This Annex lists the known "A" publication level patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent Document Cited in Search Report		Patent Family Members			
AU 40917/78		DE 2845973	GB 2007510	JP 54074132	
		SE 7811292	US 4240637	ZA 7805916	
US 4017085		JP 52106946			

END OF ANNEX